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SUBCONTRACTING INDUSTRY IN BRAZIL^{1/}

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1. MANUFACTURING INDUSTRIES IN BRAZIL

Based on the principle that as the end product becomes more complex the need to sub-contract is accentuated by the specialization as well as limitations on possible verticalization within the contracting industry. Manufacturing Industries can be divided into three major groups:

- (a) Primary products without possibilities of sub-contracting
- (b) Products with relatively small possibilities of sub-contracting
- (c) Products with larger possibilities of sub-contracting

An evaluation of the importance of each one of these groups in the Brazilian economy can be made from the statistics below which also reveal that the area where a high degree of sub-contracting is possible, still represents a relatively small percentage of the total industry volume.

- (a) Primary products without possibilities of sub-contracting:

<u>Product</u>	<u>Production Value</u> <u>US\$ 000</u>
Non Metallic Minerals	749,898
Steel	1,794,690
Wood	383,774
Paper and Cardboard	445,749
Rubber	334,295
Leather, hides etc.	140,349
Chemical Products	1,922,651
Plastics	255,082
Textiles	1,808,951
Editorial and Printing	344,130
Sundry	<u>274,258</u>
Total	8,450,991

- (b) Products with relatively small possibilities of sub-contracting:

<u>Product</u>	<u>Production Value US\$ 000</u>
Furnitures	239,043
Drugs and Medicines	429,001
Perfumery, Soaps and Candles	290,155
Clothing, Shoes and Textile Manufactured Goods	543,234
Food	3,666,379
Drinks	341,871
Tobacco	<u>195,341</u>
Total	5,705,024

(c) Products with major possibilities of subcontracting:

<u>Product</u>	<u>Production Value US\$ 000</u>
Mechanical Industries	612,926
Electric and Telecommunication Materials	976,426
Transportation Materials	<u>1,616,970</u>
Total	3,206,322

Grand Total Manufacturing Industries 17,362,337
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The industries that make the greatest use of subcontractor are specifically the following:

	<u>Production Value US\$ 000</u>
Home Appliances	225,533
Automotive	802,090

2. DEVELOPMENT OF THE SUBCONTRACTING INDUSTRY IN BRAZIL

The development of the Brazilian subcontracting industry is basically resultant of two major factors:

- (a) The existence of an industrial substructure with technical potential, energetic capacity, adequate supplies of raw material and good means of transportation that form an attractive background for the installation of major industrial enterprises, either on economical subcontracting.
- (b) The existence of a market for advanced industrial products, which could not be supplied through importation on account of the limited foreign exchange revenue of the country, that stimulated the establishment of major industries for their local production.

Both the factors are predominant in the more economically developed south eastern area of the country and as a result of that the major industries and the subcontracting industry are concentrated in this area.

Through tax incentives and other privileges the Government is promoting the establishment of industry in other areas but it will take sometime before these areas will have major industrial significance.

3. NEEDS OF THE SUBCONTRACTING INDUSTRIES

(a) Financial Assistance

In Brazil, as in all developing nations, the relative shortage of capital makes it difficult to find adequate sources of credit, interest rates and terms suitable for the installation and development of industries.

This problem particularly affects the subcontracting industry that supplies a highly diversified market that demands large quantities of material of sound quality or sophisticated technical levels.

Under these conditions, for the more complex subcontracted products, the participation of foreign capital represented a decisive contribution.

(b) Technical Assistance

It is a modern contingency that the industrial products produced by countries under development be technically compatible with similar products produced in the highly developed countries. Brazil could not be an exception to this rule and the subcontracting industry is highly dependent

of technical know-how provided by the developed countries. This is being accomplished by the direct participation of renowned international concerns or by technical assistance contracts made with such firms by local industries. Another important contribution is provided by technicians and specialists who transferred their residence to Brazil.

The sophistication created in the labor market has also induced the engineering and other technical schools to create specialization courses which few years ago were inexistent.

4. EXPERIENCE OF THE BRAZILIAN AUTOMOTIVE INDUSTRY IN THE FIELD OF SUBCONTRACTING

Special incentives were provided by the Brazilian Government for the establishment of the Automotive Industry. Benefits were given to industries proposing to reach in a five year period 95 % in weight of local content through progressive nationalization.

This program not only permitted but actually forced an organized approach to reach the yearly objectives for local content. Negotiations between the automotive manufacturers and the subcontractors were extensive and held with sufficient lead time to permit the installation of their factories and implementation of their production in time to meet commitments made with the Government.

The Brazilian Automotive Industry had its start in 1957 when the first automotive vehicles were produced on an industrial scale. At that time the country already had an incipient autoparts industry manufacturing simple replacement parts for imported vehicles.

The automotive industry found, under these conditions, a starting point for the first degrees of nationalization but the complexity of its final product demanded a subcontracting industry capable of fulfilling its needs for specialized parts and sub-assemblies in consequence of its own limited ability to verticalize.

This demand provoked the expansion of the existing auto parts supplied and the emergency of new ones to satisfy the needs of the contracting industries which had to comply with the nationalization programs imposed by the Government.

Many traditional U.S. and European suppliers participated in this program by installing their own factories in Brazil or providing technical assistance through license agreements.

The development and improvement of the auto-parts industry continues to parallel that of the Automotive Industry that has reached a high level of quality and product diversification that includes heavy trucks and tractors as well as a range of popular through luxury model passenger cars.

An indication of the importance of subcontracting in the Brazilian automotive industry is given by the amount purchased by that industry in 1967, compared to the total value of sales in the same year.

	<u>US\$ 000</u>	<u>%</u>	<u>US\$ 000</u>	<u>%</u>
Purchases - Local	496,083	90,0		
Purchases - Imported	55,338	10,0		
Total Purchases		100,0	551,421	57,8
Total Sales			954,325	100,0

The subjects explored below represent some of the problems encountered, their solution and the main rules that regulate the relations between the Automotive Industry - Contracting - and the auto-parts Industry - Subcontracting - in Brazil.

(a) Technical Assistance

In order to obtain some specific items in the local market, it was necessary to develop suppliers that did not have "know-how" of their own, or the ability to obtain license agreements for the "know-how" to produce those items.

In those cases, the automotive industries through their engineering services provide the necessary technical assistance to develop the manufacturing processes of the suppliers in order to qualify them to produce the required parts.

(b) Installation of Basic Components Industries Non-Existent in the Country

For certain basic assemblies of the vehicle, a high degree of technical specialization in manufacturing, and a large investment are needed for their production. These requirements demand the participation of foreign enterprises with experience in the production of the items, and capital to invest.

In order to attract the installation of these enterprises in the country, the several Automotive Manufacturers joined together with the objective of

increasing volumes and standardizing design, where possible, so that marketing conditions for the local production of those components would be feasible.

At present, all new industrial projects which implementation is based on special governmental concessions, must be submitted and approved by the Council of Industrial Development, which takes into consideration existing industries, granting them priority of expansion prior to authorizing projects involving new sources.

(c) Availability and Control of Raw Materials

The existence of many small and medium-size suppliers originated a problem concerning the quality control of raw materials acquired by them for the manufacture of their products.

In view of the lack of economic conditions to maintain their own laboratories for quality analyses of raw materials, and the use of Government or private laboratories, being either difficult or impractical, the problem was solved through the requirement and acceptance by the automotive industries of Quality Certificates given by the Mills, covering each delivery of material.

(d) Schedule of Deliveries

The policy of the Automotive Industry in Brazil referring to deliveries of components ordered from suppliers, follows the same pattern used in developed countries.

- Purchase Orders are issued for open quantities
- Delivery programs issued on a monthly basis are firm for the first months and estimated, therefore subject to variance, for the later months.

The combining of firm and estimated schedule covers a period of six months, ample time to provide material and processing to meet delivery requirements.

5. QUALITY CONTROL OF SUPPLIED COMPONENTS

A remarkable change in the Quality Control System of components supplied by the subcontracting industry occurred since its starting point.

In the beginning it was imperative and mandatory that inspection be made at the receiving depot. However this system has evolved to the point of "Assured Quality" by the Vendor where the Purchaser recognizes the Supplier's capability of maintaining uniformity of the established standards, eliminating the need of inspecting individual shipments. Inspections are made only as a spot-check.

6. PRICES

The basis of price negotiations is developed mainly through the analysis of a break down of cost components in which local conditions are taken into account. A comparison with the existing prices in developed countries is made only as a reference and not as a guide.

7. SOURCING PATTERN

The Brazilian Automotive Manufacturer makes his own engines and bodies. Some also make rear axles and transmissions. All other components such as, electrical parts, trim parts, ornamentation, suspension, brakes, springs, standard parts, wheels, steering gears, driveshafts, etc., are supplied by subcontractors that consequently have a most significant participation in the completion of the final product.





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